Clinical Section

Industrial Medicine

by EMMET DWYER, B.A., M.D.
Regional Medical Officer, Western Region, Canadian National Railways and Trans-Canada Air Lines.

Good medicine is not necessarily good Industrial Medicine. To be a competent industrial physician it is necessary to be more than just a Doctor. A physician who serves industry must know something of the principles of Management and Labor Relations. He should be familiar with the industrial processes carried out in the plants he serves, and, whilst he always required at least some casual knowledge of Industrial Hygiene in connection with Lead, Silica, and Carbon Monoxide, the War has resulted in our plants undertaking manufacturing processes entirely new to them and involving the use of toxic chemicals with which the Industrial Physician must become familiar. He must also deal with First Aid, Accident Prevention, and Sanitation, and be prepared to treat and advise sick and injured employees whether male or female. He conducts routine examinations for various specific purposes and so is called on for advice in placement and rehabilitation problems. He meets frequently with lawyers, claim agents, and compensation boards, and is expected to assume numerous and diverse duties ranging from the organization of the Red Cross Blood Donor Campaign amongst his firm's employees to advice on the best and safest solution for cleaning printing machines.

I am not, of course, suggesting that we in Industry are Specialists in everything. I have, in my department, a number of Nurses, Clerks, and Technicians, and trained advisors on First Aid, Sanitation, and Accident Prevention, and, in organizations like the Canadian National Railways and Trans-Canada Airlines, advice is available from specialists in practically all types of industrial and professional work.

In spite of so much valuable assistance, however, the doctor in industry must still know and treat his patients and spend a good many of his evening hours studying subjects that many of you do not have to bother with.

Skin Protection

Recently I have had to recommend skin protection ointments for workers who use cleaning agents like "Gunk" and "Varsol" but who handle highly polished materials that must not be smeared with grease. This problem was met in two ways. First of all I provided a preparation known to the chemical trade as "The Invisible Glove"[1] type of ointment, which when rubbed into the skin deposits vanishing cream in the pores and leaves an adherent protective coat of powder on the surface. Application of this paste leaves the skin with a dry "tacky" feeling almost as if it were covered by a snugly-fitting glove so that I also advised the use of what the ladies buy under the name of "Skin Food," that is a Lanolin and Castor Oil mixture to rub into the skin after the end of the work shift.

Radium Hazard

Another interesting problem I am working on at the present time is the question of the radium hazard amongst workers repairing luminous instrument dials. We have an instrument repair room in which sixty-five persons work. At times several thousand luminous dials are stored in and above the room. After study of the situation I issued detailed instructions on the storage and handling of these dials, insisted that repair men, and women, wear rubber gloves and use forceps when working on them, banned food from the workshop, arranged for improved washroom facilities, and had the ventilation system altered. After carefully studying the situation and consulting with experts,[2] I decided that there was no real danger to these workers from gamma radiation but for the protection of all concerned I am having a Geiger-Muller counter built and with it I will, from time to time, test all exposed employees to determine how much, if any, radon gas they are exhaling.

Goggles

In our Organizations we are actively interested in saving eyes. We found that many hundreds of our employees had only one useful eye. All of these men and all who are engaged in work that might damage their sight are required to wear appropriate safety goggles. No doubt you have often heard it said that a one-eyed worker never seems to injure seriously his remaining eye. However, during the past winter I have handled at least three cases that cast doubt on such a belief. All concerned were middle-aged men who had lost the sight of an eye by accident in our employ before the days of Safety Goggles. The first one still had his useless eye but had to have it enucleated after it was struck by a flying nail. The second man had had a traumatic cataract in one eye from childhood. After he lost his good eye a lens removal from the other one plus the use of corrective spectacles enabled him to obtain 20/40ths vision in it and in spite of the passage of time it does not appear that this vision has lessened very much but the man himself has gradually developed a psychosis and is firmly convinced that he can no longer see well enough to do his work. The last of this trio noticed one evening in November 1942 that he could not read his evening paper. Over a period of a week the sight in his remaining eye deteriorated to 4/100ths. The Doctor he consulted initially told him he had welder's retinitis.

As you probably know, a man who has two good eyes, and loses one by accident costs the employer, hereabouts, on the average, about $1,600.00. The same average man who has only one good eye and loses it by accident costs his employer about $10,000.00. I felt very sorry for the claimant in this particular case but I knew that he did very little welding and that when he did any he always protected himself with the proper shade of welding glass and that he could not, therefore, have welder's retinitis. I arranged for an examination by another Eye Specialist, who diagnosed "retinal thrombosis." The man's claim was rejected but the Company is at present considering granting him a gratuitous pension.

> In conducting a medical service for an industry, whether it be a wealthy established firm or a struggling new business, the Doctor must demonstrate that the service pays. It should pay in dollars and cents; in employer-employee relationships; in increased efficiency of the workers; and in a lower accident rate and shorter disability periods.

The industrial medical department should not, as a rule, attempt to furnish a complete medical service. We offer full care of industrial accidents and illness, and, in addiiton, treatment of ambulatory illness only, primarily to try to keep the worker on the job. We do not follow the sick employee into his home, but, instead, refer him to his family physician with whom we are always ready and anxious to co-operate whether by communicating our findings and opinions to him, or, by trying to get special consideration at work for his patient when such is indicated.

Confidential Files

A Medical control program in an industry must fit in with the Companies' Administration and must also satisfy the employees, or in other words make the unquestionably difficult attempt to "Serve both God and Mammon." To do this you must "call the balls and strikes" as you see them, keep out of disputes, and recognize conditions as they are and not as they might be. Case histories must be accurate and held in strictest confidence even from senior officials of the Company to whom necessary reports should, as a rule, be made only in the terms. "Fit" or "Not Fit," though of course circumstances will modify this rule at times, particularly where the welfare of other employees or an unjust claim for injury may be involved.

Routine Examination

In my office we carry out routine examinations hour after hour and day after day. All applicants for employment must be examined. The entrance to service standards vary with the job in prospect. Men out of service for six months, or sometimes less, are examined before they return to work. Food handlers are examined every three months. Applicants for extension in service past the normal retiring age or for early retiral on pension on account of ill-health must be reported on. All men in train, yard or engine service and a number of smaller groups receive an eye, ear, and physical examination every two years. Airline pilots have a particularly painstaking examination[3] with many special tests every three months. Stewardesses and airplane despatchers are similarly handled and in Trans-Canada Airways everyone in the employ is examined at least every two years.

To some extent these routine examinations become tiresome. There are about 120 District Medical Officers in the territory under my jurisdiction and all their examination reports come to me. During these war years labour turnover in some branches of our work has run as high as 40% per month. Consequently, I see thousands of examination reports in a year but if you would look at this monthly summary of rejections for January 1943 you might feel that even routine physical examinations can provide a Doctor with a large number of most interesting cases. This list of 75 names includes rejections on account of deafness, blindness, defective color-sense, various deformities both congenital and acquired, "writers cramp," gastro-intestinal and gall bladder conditions, ischio-rectal abscess, osteomyelitis of the pubic bone, syncopal attacks from various causes, and of course, heart disease, diabetes, nephritis, and a number of other conditions either alone or in combination.

I really think, however, that as compensation for the drabness of routine examinations, the industrial physician sees a greater number and variety of interesting conditions that does the average doctor in private practice. Many of the problem cases in our five Western Provinces and in the State of Minnesota eventually arrive at my office for investigation, advice or decision as to suitable work. Oftentimes these cases have been carefully studied by various medical specialists, supervisory officers, claim agents, lawyers, and compensation boards, and the results of all these investigations are available to me. I see the mistakes that have been made by the medical attendants and the most common error is the use of *"post hoc ergo propter hoc"* reasoning, or, in other words, the assumption by the Doctor that because a disability followed an alleged accident, perhaps a most trivial one, the ensuing serious disability should be attributed to that accident.

Costly Cases

One outstanding example of this was the case of Trainman "B," aged 52. He sustained a minor contusion of the chest. No rib fracture was ever demonstrated. I examined him a week after his accident and said he could return to work. However, he developed an acute illness with high fever and was off work another six weeks. His family doctor attended him and never did make a diagnosis but did state that the disability was the result of the accident though it seemed altogether likely that the man had an encephalitis. A few months after he resumed duty he was suspended for unsatisfactory work. On examination it was evident that he had Paralysis Agitans. He was

continuously disabled until his death from bronchopneumonia some three years afterwards. He had never had even so much as a head injury to vaguely explain his disability and yet the Compensation Board assessed costs of some $10,000.00 against the Company. I assembled three different medical boards of particularly qualified men who submitted very able reports ruling out the trauma as a cause of disability but all to no avail. The opinion of the man's own Doctor outweighed the rather overwhelming evidence I had produced.

Coronary artery disease brings forth many comparable cases. The average age of Railway employees is around the mid-fifties. I see or have dealings with a number of coronary cases every month. A claim for Compensation is filed in over half of the cases that occur at work. As a rule we effectively disclaim responsibility but in the Province of Saskatchewan many of our employees have chosen to deal directly with the Company in case of injury rather than through the Compensation Board and since the Courts in that Province put a very broad meaning on the word "Accident,"[4] we have, to my knowledge, paid perhaps a dozen such claims in Saskatchewan where the attending Doctor gave a written opinion that the coronary attack was the result of an accident or of some commonplace effort incurred in the course of routine duties.

A train baggageman, "R," aged 54, was helping two other men lift a trunk into a baggage car. He collapsed and twelve hours later he died. He had had a blood pressure of 240/140 with other cardio-renal signs for about two years. The Doctor who attended him attributed death to the "strain" of lifting the trunk rather than to the long overdue result of his vascular disease.

I personally subscribe to Paterson's[5] theory of coronary occlusion. You will recall that he has demonstrated that a coronary occlusion commences with the rupture of a subintimal capillary into an anteriosclerotic plaque in a coronary vessel, and that a number of days elapse between the beginning of this process and the onset of acute symptoms. Consequently, it is not reasonable to attribute the attack to some shortly antecedent effort.

As a matter of fact in this case of Baggageman "R," the labour organization's lawyer, after spending some hours with me and with our lawyer and an independent Cardiologist, reduced his claim from $10,000.00 to $1,500.00. Rather than go to court we paid this sum, though, for a long time, I have been waiting for a suitable case of this type to bring into Court with the hope that a new legal precedent might be established.

> If it should prove possible to convince Courts of Law that Industry should not be held responsible for attacks of coronary thrombosis and other disabling cardio-vascular disease occurring amongst workmen in the course of their ordinary duties, many men now barred from work as undue accident hazards could be allowed to work out their allotted span to the advantage of both themselves and their employers.

Low Back Pain

Low back pain allegedly due to trauma is another problem constantly confronting the Industrial Physician. I think most Doctors find these cases distasteful and are not accustomed to giving them the benefit of the same careful investigation they conduct when confronted with problem cases of other kinds—*e.g.*: I frequently receive medical reports reading, in effect, "Patient was lifting hand-car and *strained* muscles of lower back." That is really the patient's diagnosis and not the Doctor's. In many such cases there is no external evidence at all of a muscular or ligamentous strain and further investigation will, not infrequently, reveal that the pain did not commence for some hours after the event blamed by the patient, or in other instances, that because of a chronic sore back the man was for some years known as the local Druggist's best liniment customer.

Something else to look for in these aching backs is an inguinal hernia. I have seen three cases in the past two years in which a low back pain, present at work but not at rest, was relieved by the application of a truss. More frequently, however, I have had excellent results in cases of the Lumbago (?) type by the deep injection of a long-lasting local anaesthetic such as Eucupin, followed by stretching exercises during the period in which the anaesthetic kept the patient pain-free.

We all appreciate, of course, that backache arises from many causes but I think it is too often forgotten that in a claimant for compensation the disability from a sore back may gradually be displaced by a psychologic disability.

Fifteen-Thousand Dollar Fiasco

A few years ago I was in Court in a Saskatchewan city over a case that appeared to be of this type. The claimant seemed to be an honest sort of man but it was my opinion that his organic disability was not very great. The only abnormality seen in his X-Rays was a scoliosis at the fourth lumbar vertebra. Radiologists and Orthopedic Surgeons testified clearly and favourably on our behalf and a reasonable judgment against us appeared to be in prospect until an old chap who swore under oath that he was a Doctor and had attended the claimant a few minutes after he was hurt gave his evidence. I wrote it down at the time. It went, in part, as follows: "I tried to forestall pneumonia and ankylosed the ribs to the lung by adhesive tape. There are 31 vertebrae. I saw that the 12th dorsal vertebra was slightly rotated. I lined up all the vertebrae above and below this joint but I was satisfied that the 12th dorsal was not in line." Later on he continued, "I manipulated all the vertebrae into line with my fingers but could not keep the 12th one in

place." When the old gentleman concluded his testimony the Judge said: "In other words he had a paralysis," and the Jury, in due course, awarded the claimant $15,000.00.

Perhaps you would be interested in a few words on another type of back injury that very properly costs the employer a large sum of money, namely; fracture dislocations with cord injury. I had occasion, a few years ago, to enquire as to the life expectancy in these cases. The literature did not prove very informative but as a result of correspondence with a number of Compensation Boards and Insurance Companies, I learned that, contrary to popular opinion, these cases have a life expectancy of about one-quarter of normal and that a certain number of them will live for decades.

I have case histories on tuberculosis epididymitis manifesting itself some months after an alleged strain; on trigeminal neuralgia commencing five years after severe trauma to the face; on a man who undoubtedly cut his tongue in licking a manila envelope and subsequently claimed, when his tongue didn't heal and his Wasserman was Positive, that the envelope must have contained spirochetes. Other claims that trauma or "strain" caused various types of cancers, appendicitis, peptic ulcer, epilepsy or apoplexy are all dealt with in the course of a year's work and serve, at least, to keep the Industrial Physician doing his daily stint of reading in order that he may comment intelligently on them.

This presentation has not by any means detailed for you all the problems or activities of an Industrial Physician. In some spare moments I dictate about five to eight hundred letters a month and stamp or sign my name some thousands of times. The Industrial Physician must at times feel that what are, after all, the not-so-far fields of private practice look enticingly green, but he is, nevertheless likely to conclude that his own work offers interest and satisfaction quite comparable to that of his fellow-practitioners.

FOOTNOTES AND BIBLIOGRAPHY:

(1) Sold by Canadian Industries Limited under trade name "Protek."

(2) Personal communication from Dr. P. A. MacDonald of The Cancer Relief and Research Institute.

(3) British Air Regulations No. 130, plus various additions.

(4) Hewitson vs Robin Hood Mills Ltd. (1924) 1 W.W.R. (143).

(5) Paterson, J. C., Relation of Physical Exertion and Emotion to Precipitation of Coronary Thrombi, J.A.M.A. 112: 895 (March 11, 1939) and J.A.M.A. 112: 2346 (June 3, 1939).

Editorials and Association Notes

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A Study of Maternal, Infant and Neo-Natal Mortality in Canada

Attention is called to this report, issued recently by authority of the Minister of Trade and Commerce, Ottawa, in 1942. It was prepared by the Dominion Bureau of Statistics in collaboration with the Department of Pensions and National Health for use in Medical Schools, by physicians in private practice, and by public health workers and educators in Canada. The study presents the basic statistical features of maternal, infant and neo-natal mortality in Canada, in conjunction with nativity, general mortality, marriage and stillbirth statistics for the fifteen-year period of 1926 to 1940.

The analyses shown opposite each chart have been prepared by Dr. Ernest Couture, Chief, Division of Child and Maternal Hygiene of the Department of Pensions and National Health.

From 1926 to 1937 there was a gradual decrease in the birth rate amounting to almost 20 per cent. The year 1940 showed a slight rise in the number of live births but not to the level of 1926 which was 25 per 1000 population. As the marriage rate increased sharply in 1939 and 1940, it is probable that the birth rate in 1941 and 1942 will show a further increase.

The following definition of a stillbirth recommended by the International Commission has been used since 1932:

> "The birth of a foetus after 28 weeks or 6½ months of pregnancy measuring at least 35 centimetres from the crown of the head to the sole of the heel, in which pulmonary respiration does not occur."

There has been a gradual reduction since 1934 and 1935 in stillbirths. The rate of 27.2 per 1000 live births in 1940 means 6634 stillbirths. In this connection attention is directed to the study by Dr. F. G. McGuinness of ante-natal, natal and neo-natal deaths occurring in the Obstetrical Department of the Winnipeg General Hospital over a period of eleven years. This article appeared in March, 1943, issue of the Canadian Medical Association Journal.

The maternal death rate for Canada after remaining stable for a number of years began a downward trend in 1931. During the last ten years there has been a decided improvement except for the years 1934 and 1936. Since 1937 the decrease in maternal mortality rate has been striking and most encouraging. The rate for 1940 was the best ever recorded in Canada, 4.0 per 1000 live births. Contrasting 1940 with 1931 there was a drop of 31 per cent.

In 1940, 66.4 per cent of all maternal deaths (or 649 out of 978) are attributed to three chief causes—puerperal sepsis, toxaemias of pregnancy, and puerperal haemorrhage—all conditions which could be prevented.

With regard to puerperal haemorrhage the Manitoba Pregnancy Survey brought out the fact that transfusions were used in far too few cases. Blood banks for emergency maternity cases would prevent much loss of life and health. Studies and nutrition surveys have revealed that the incidence of haemorrhage is reduced through good nutrition during the prenatal period.

With regard to the toxaemias of pregnancy the Manitoba Pregnancy Survey showed that only 25 per cent of the mothers dying from this cause received what is considered the recognized minimum of prenatal care (using five or more visits as a standard); moreover the percentage was only 17 if the quality of care is considered; that is, taking of blood pressure, weighing of the patient, urinalysis, blood tests, pelvic measurements, etc. Toxaemias come second to septicaemia as a cause of maternal deaths, and take first place if septic abortion is excluded.

Infant mortality shows a reduction since 1926 of 45.1 per cent, a saving of 11,100 lives. Even the 1940 rate, 56 per 1000 live births, in Canada, is not particularly good when compared with the infant mortality rate of many other countries including New Zealand, Australia, the United States and the British Isles.

The report which is presented in a series of graphs is well worth careful study. R.B.M.

New Steps in Pre-Natal Care

The Sanatorium Board of Manitoba recommends that, wherever it is possible, pregnant women should have X-ray examination of the chest to detect pulmonary tuberculosis.

This recommendation is addressed to all medical men and particularly to those in charge of prenatal clinics in hospitals where chests can be fluoroscoped, or preferably have X-ray films taken, with a minimum of expense and time.

It was only after careful study and discussion that this recommendation was adopted by the Sanatorium Board. It was based on the following considerations:

1. Tuberculosis still remains the leading cause of death for women of child-bearing age. The tuberculosis toll in this age-sex group accounts for 20 per cent of all deaths, twice as high a mortality as from all puerperal causes. In the Manitoba Pregnancy Survey, 1928-40, tuberculosis was the disease most frequently associated with deaths of pregnant or recently delivered women.

2. As a result of the war, tuberculosis is on the increase and the increase is likely to continue for a time.

3. Non-recognition of tuberculosis in early pregnancy is likely to lead to the disease being far advanced before remedial measures can be taken.

4. Unrecognized tuberculosis in pregnancy menaces the health of the child to be born.

5. Symptoms related by the patient and ordinary physical methods of examination are quite inadequate as a means of discovering pulmonary tuberculosis.

6. Application of routine chest fluoroscopy, followed by roentgenograms in cases with definite or suspected lung pathology, is a satisfactory method of finding tuberculosis. With recent improvement in X-ray technique fluoroscopy might be dispensed with and X-ray films, miniature or of regulation size, might be taken in all cases. This would be still more satisfactory as a means of detecting tuberculosis.

7. Workers in the Chicago Lying-in Hospital during the years 1934 to 1941 in a series of 10,968 pregnant women, unselected except for the exclusion of known tuberculosis, found 110 cases of unsuspected clinically important tuberculosis, or an incidence of 1 per cent. Seventy-four cases, or 0.7 per cent, were shown to be active during the pregnancy.

8. During the same period the incidence of unsuspected syphilis in the same clinic declined markedly from 0.87 per cent during the period 1934 to 1937 to 0.30 per cent during the period 1937 to 1941.

On the basis of these facts the Sanatorium Board of Manitoba considers that routine chest X-ray examination should rank with routine Wasserman tests as a medical necessity in pregnant women.

Cholera in 1832

(Old document found at a H.B.C. post in Labrador and given to Dr. Ross Mitchell by the Editor of *"The Beaver."*)

Dartmouth, September 10, 1832

Sir:

Having now witnessed the death of many Persons from Cholera, whose lives probably might have been saved, had the premonitory symptoms, been known to themselves, *immediately* attended to, and properly treated. I feel it my duty to send to you (as you are so far removed from Medical assistance) a statement of the primary symptoms, with the appropriate remedies, which I can confidently recommend, having now proved their efficiency, when early administered, in a very large number of cases, and corroborated by other Medical Gentlemen who have also adopted them; and they will be found to be perfectly safe, if the directions are attended to, in the hands of any sensible person.

I remain,

Your obedient Servant,

Henry Hunt.

When a person is first attacked with this disease, the mind and nerves are often greatly disturbed, the legs fail, there is a general feeling of lassitude and fatigue, a dull, heavy weight is felt at the pit of the stomach, with a sensation of fulness, not amounting to acute pain; a dizziness in the head and confusion of ideas, an uneasiness in the bowels with a tendency to retch, and general feeling of coldness with occasional transitory heats; at times a cold perspiration, with a great anxiety, or as my patients have expressed themselves, "feeling miserable without being ill." These symptoms continue from one hour, to twelve, gradually increasing in severity, until those that are well known succeed, such as cramp, vomiting, diarrhoea, &c. After which the case becomes so formidable, that I cannot venture to recommend any plan in a letter of this description. As soon as any of these primary symptoms come on, the person should go to bed in a flannel dress, and lie without sheets between the blankets; a bottle of hot water on a heated brick wrapped in flannel, should be placed under each armpit, and one between the legs and at the feet, the head as well as the rest of the body being covered; and two table spoonfuls of the following mixture should be given every quarter of an hour, until copious perspiration is produced; as soon as that takes place, the uneasiness, pain, and anxiety will subside, then the dose should be repeated once an hour, for three or four hours, by which time medical assistance ought to have been procured, and the treatment must then be varied according to the circumstances of each case.

MIXTURE

Sal Volatile: half an ounce.
Water: six ounces.

Winnipeg Medical Society

C. B. STEWART — *President*
C. M. STRONG — *Vice-President*
MEETINGS
Third Friday, each month

J. C. HOSSACK — *Past President*
DIGBY WHEELER — *Past President*
Next Meeting
April 16th

H. F. CAMERON — *Secretary*
A. T. GOWRON — *Treasurer*
MEETINGS
Start exactly at 8:15 p.m.

NOTICE BOARD

I see by the papers that chiropractic has again reared its ugly head. Its cultists want to paricipate in the benefits of the proposed Health Plan (as doctors, not as patients) and as a preliminary are taking steps "to have the Provincial Legislature recognize chiropractice as a profession."

Well, there are professions and professions. The one usually referred to as the oldest is not distinguished for its honesty or its respectability so perhaps a place might be found for Dr. Palmer's brain child. There is no doubt that Palmerism has improved. Now the chiropractic student goes to school, not so long ago the school came to him and he went to the post office to graduate.

What charms, what conjuration and what mighty magic are taught within these temples of pseudo science I do not know, but apparently there is much that we don't learn and very little that we do. Like the ancient German king who said he was above grammar so the modern chiropractor is above anatomy, physiology, bacteriology etc. To parody Mark Twain's well known lines chiropractic consists of "Punch the spine brother, punch with care, punch in the presence of the customaire"; and the neurocalometer tells you just where to punch! And then there's the cash register.

These therapeutic monstrosities, to whom science is only a word in the dictionary, hope to set their fantastic hocus-pocus by the side of our profession and, unless we are on the alert, may do so. Let no one delude himself with the thought that the common sense of the people or their respect for us will come to our rescue. The people, as a whole, never had, have not now, and never will have common sense when it comes to matters of health. Judy O'Grady and the Colonel's lady are alike in this—they will circulate and sign petitions and work for the promotion of any fad that takes their fancy or that appeals to their unscientific miscalled reason, whether it be astrology, tea cup reading, yogiism or chiropractic. And Private O'Grady and the Colonel are in the same boat with them. Therapeutically speaking the people have no common sense nor have they any for us, as a profession, either respect or love. Nor are parliamentarians a whit better. Are not the chiropractors classed with us in the matter of gasoline rationing?

You may depend upon it that the irregulars will fight hard to win their cause. They are past masters of the art of advertising. They are completely free from any tincture of science and can easily out-argue us before an audience of similarly credulous, uncritical and unscientific people, whether that audience be in parliament or out of it. Otherwise sensible people such as lawyers, educators, parsons and business men are just as likely to favour the irregular as they are to favour us. Their powers of discrimination vanish when the question relates to the care of the sick. Sickness to them is a mystery more likely to yield to the wizard than to the philosopher. The only persons who can be counted upon to consistently and wholeheartedly oppose the aims of the chiropractors are ourselves.

You who read this may seethe with indignation at the thought of quackery being raised to sit by the side of scientific medicine. But your indignation is a futile vaporing unless you add it to that of many others. Not as a private individual but only as a member of the Associations can your influence be felt. It is no longer merely a privilege, it is now a duty, to be such a member. It is, indeed, doubly a duty for not only must you act to defend your own interests, you must also act even more strenuously to defend those of your colleagues whose sense of duty has set them where they can neither speak nor act for themselves. The future of medicine can be made secure but only if we are completely united.

◈ ◈

Carcer you will remember is the Latin word for jail and avis for bird. A jail bird, then, would be carcer-avis and a doctor who cares for jail birds might be called a carceravisian. The principal local exponent of this exclusive specialty is Dr. Russell Gorrell, who is also coroner. His practice, therefore includes the quick (speeders) and the dead (victims of speeders), and also the not-so-quick whom the police catch and put into the Big House.

Dr. Gorrell is not ashamed to admit that he has been in more jails than any doctor in Canada. His record is Sing Sing, Alcatraz, Fort Leavenworth and a dozen others in a few weeks. He would rather visit a bad jail than a good movie. He gave an account of his experiences in various penal institutions at the March meeting. Dr. Gorrell is opposed to capital punishment, but taking it by and large there is much to be said for the simple penal system of Draco and of the White Queen in Alice in Wonderland. For all crimes

their sentence was the same, "Off with his head!" The deterrent effect upon potenial offenders must have been considerable and it completely eliminated any possibility of a second offense.

On the same programme was a paper by Dr. Thorson on Hypertension. A disorder that has become not merely Captain but Captain-General of the Men of Death deserves serious consideration. Dr. Thorson reviewed what had been done and was being done to combat the condition. The role played by the kidney is a great one, not only in causation but as the source of a potent remedy. Matters are still in the academic stage, however, for the extract is so costly that there is no chance of its general use. Freedom from hypertension, therefore, still remains a thing devoutly to be wished.

Hypertension still holds its grip on thousands, but hypertension as associated with shock has lost much of its sting. Dr. Lamontagne gave a paper on the treatment of shock. He discussed the processes which produced the clinical picture and described the measures and methods best calculated to change its sombre hue. The use of blood and plasma have vastly changed the outlook in cases of shock.

Blood is a very ancient remedy, but only recently has it been used to full advantage. I wonder if it is generally recognized how large a part Canada has played in the development of blood therapy. The name of Henry Norman Bethune should be as familiar as that of Osler or Banting for he was, I believe, the first to use serum and blood extensively in battle.

Bethune was a most colorful person who packed lifetimes into the narrow compass of 38 years. Shortly after the outbreak of the Spanish Civil War he went to Spain. He coaxed, besought, and bullied the Spaniards into giving their blood for their soldiers. Often the blood was "refrigerated" by immersing the containers in mountain streams and caves near the fighting line. He did the work of many men and broke down under the strain. For rest he returned to America, but so reduced were his funds, that he had to travel steerage.

When he had recovered he set out again, this time to China, where he again organized and directed a blood-transfusion service. As it had been in Spain, so it was in China. He stood almost alone labouring at a task that even Briareus with his hundred hands would have found difficult. Here are his own words: "Why, oh why," he pled, "are we not receiving more help from both China and abroad? Think of it—200,000 troops, 25,000 wounded always in hospitals, over 1,000 battles fought in the past year and only 5 Chinese graduate doctors, 50 untrained Chinese 'doctors' and one foreigner to do all this." In 1937 death came to Bethune while he was at work.

"We've done it before and we can do it again" is the theme song of Dr. Gowron these days. You will recall that last year we established a treasurer's record by ending the year with every one paid up. Now, at the moment, there are 43 debtors who collectively owe 215 dollars. Your Executive need and want every one of these dollars and would like all debtors to "cough up." So, if this applies to you, will you please expectorate?

A word about the Overseas Fund. Let me first of all thank those who have been generous enough to help. For your information the committee consists of Dave Swartz who is our military representative; Pat McNulty (known to most of you as the presiding genius of the McNulty Clinic), who is the Manitoba Medical representative, and myself. Lately two more members have been added, Dr. Edmison, who has just returned after two years in England; and Dr. Gowron, who handles the money. As we are anxious to send to each overseas member those things which he most wants or needs and, to to make this possible we have included a card with each parcel asking its recipient to state his wishes. We are anxious, also, to make sure that no one is overlooked. This has occurred in the case of men in the Navy, and we have, in such instances, been able to correct matters through the interest of those who told us about it. If anyone by any chance learns of any omission, please let us know.

J. C. Hossack.

Overseas Fund

Flin Flon Clinic, Flin Flon, Man.	$10.00
Dr. R. M. Creighton, Oak River, Man.	5.00
Drs. N. G. Trimble and M. K. Brandt, The Pas, Man.	10.00
Previously acknowledged	147.75

Forward your Donations to

Winnipeg Medical Society
101 Medical Arts Building
Winnipeg, Man.

Personal Notes and Social News

Major A. C. Rumball has arrived at Brandon from overseas, where he served with the R.C.A.M.C. No. 5 Canadian Army Hospital since January 1940.

◈ ◈

Flight-Lieut. John Edwin Rose, R.C.A.F., son of Mrs. Rose and the late Dr. Edwin William Rose, of Gladstone, Man., was married on Saturday, March 13th, to Marjorie Ethel, elder daughter of Mr. and Mrs. Arthur Bertram Gardiner of Winnipeg.

◈ ◈

Dr. F. Gerard Allison (Arts '24; Medicine '29) was elected 1943 president of the University of Manitoba Alumni Association.

◈ ◈

Dr. and Mrs. W. Malyska of Waskada, Man., are receiving congratulations on the birth of a son, on February 27th, 1943, at the Deloraine Memorial Hospital.

◈ ◈

Congratulations are being received by Dr. and Mrs. F. E. Scribner of Gimli, Man., on the birth of a daughter (Elaine Lillian) March 5th, 1943.

◈ ◈

Captain and Mrs. A. B. Houston are celebrating the arrival of a son (Edwin Stuart) at the Winnipeg General Hospital, March 8th, 1943.

◈ ◈

Major and Mrs. Alan A. Klass are receiving congratulations on the birth of a son (Daniel Jacob) on February 17th, 1943, at the Winnipeg General Hospital.

◈ ◈

Dr. and Mrs. J. D. McEachern's only daughter Alice was married Monday, March 15th, to Corp. Harry Gordon Aikman, only son of Mr. and Mrs. Aikman of Dauphin, Man.

◈ ◈

SPRING (1943) POEM

The Sun Shines Bright
The Wind Blows Warm,
Get Ready for a—
Big Snow Storm.

And then there was the chap who sojourned at the Pacific Coast early in March. For 10 heavenly days he forgot all about the weather on the prairies. He basked in the warmth of Old Sol and inhaled the balmy Zephyrs of Victoria. Three days after he had played a round of golf in his shirt-sleeves, he arrived back in Winnipeg. It was the morning after the city had been buried under the now historic blizzard. Compared to his verbal definition of this frigid neck of the woods, the blizzard was tame indeed. During the first few hours after his train arrived, anyone with a spare plugged nickel could have made a down payment on a city mansion, a summer estate, a swell car with five good tires, and a lucrative medical practice.

Dr. and Mrs. Digby Wheeler are vacationing at Victoria, B.C., where they are guests at the Oakbay Hotel. They plan on returning to Winnipeg about the end of March.

◈ ◈

Captain Louis P. Gendreau, formerly of Selkirk, has been transferred from R.C.A.M.C., M.D. 10, to the district medical officer's department in M.D. 4, Montreal, Que.

◈ ◈

Capt. J. Gilman Barrie (R.C.A.M.C. Overseas) and Mrs. Barrie announce the birth of a son (William Myron) on March 19th, 1943, at St. Boniface Hospital.

◈ ◈

Lieut.-Col. C. H. A. Walton, who has been overseas with No. 5 General Hospital Unit, R.C.A.M.C., since January, 1940, has been elected a Fellow of The American College of Physicians.

◈ ◈

Dr. A. G. Dandenault has been appointed a Fellow of the American College of Surgeons.

◈ ◈

Dr. J. Picard's daughter, Lois Belle, was married on March 9th to Leading Aircraftsman Cyril T. Coughlin of Winnipeg.

Department of Health and Public Welfare

Comparisons Communicable Diseases—Manitoba

(Whites Only)

DISEASES	1943		1942		TOTALS	
	Jan. 31 to Feb. 27	Jan. 1 to Jan. 30	Jan. 29 to Feb. 2	Jan. 1 to Jan. 28	Jan. 1 to Feb. 27, 1943	Jan. 1 to Feb. 25, 1942
Anterior Poliomyelitis	3	3	1	2	6	3
Chickenpox	154	267	294	412	421	706
Diphtheria	31	20	21	9	51	30
Diphtheria Carriers	3	1	1	1	4	2
Dysentery—Amoebic	.....	.....	.....	.....	.....	.....
Dysentery—Bacillary	.....	.....	.....	.....	.....	.....
Erysipelas	4	5	9	3	9	12
Encephalitis	.....	1	.....	.....	1	.....
Influenza	55	21	77	55	76	132
Measles	154	97	797	396	251	1193
Measles—German	10	.....	84	47	10	131
Meningococcal Meningitis	3	3	4	3	6	7
Mumps	593	433	505	366	1026	871
Ophthalmia Neonatorum	.....	.....	1	.....	.....	1
Pneumonia—Lobar	9	6	9	12	15	21
Puerperal Fever	.....	.....	.....	.....	.....	.....
Scarlet Fever	105	43	167	91	148	258
Septic Sore Throat	4	.....	16	13	4	29
Smallpox	.....	.....	.....	.....	.....	.....
Tetanus	.....	.....	.....	1	.....	1
Trachoma	1	1	.....	.....	2	.....
Tuberculosis	47	30	35	20	77	55
Typhoid Fever	.....	2	1	3	2	4
Typhoid Paratyphoid	.....	.....	.....	.....	.....	.....
Typhoid Carriers	.....	.....	1	.....	.....	1
Undulant Fever	.....	.....	1	1	.....	2
Whooping Cough	129	158	24	19	287	43
Gonorrhoea	158	174	107	79	332	186
Syphilis	39	45	57	43	84	100
Meningococcal Meningitis Carriers	4	2	.....	.....	6	.....

POLIOMYELITIS—Again this period three cases are reported in Manitoba.

DIPHTHERIA—Is definitely higher than our usual high. Compare it with the other Provinces and States! Of the 31 cases, 21 were in Winnipeg, 2 in St. Boniface, 2 in West Kildonan, 1 in St. Vital, 1 in Fort Garry, 1 in Springfield, 1 in Transcona, 1 in Grey and 1 in Flin Flon.

ERYSIPELAS—Infection remains fairly constant.

INFLUENZA—Although a mild epidemic has been widespread throughout the Province very few cases have been reported. Not many deaths have occurred.

MENINGOCOCCAL MENINGITIS—Just a few cases in the various Provinces and States. Four more carriers were found at Camp Shilo.

SCARLET FEVER—Is prevalent throughout the area but slightly less than in 1942.

TUBERCULOSIS—Rejection of recruits for the Army is increasing our figures but many of these are not active cases.

WHOOPING COUGH—Shows a large increase over 1942 and will probably attack most of the non-immunes. Vaccine is now being issued free by the Department of Health and Public Welfare. Announcement and article appear in this issue of the Review.

Gonorrhoea—Shows an increase. Adequate treatment of every case is necessary and it must be remembered that the sulfonamides are not nearly 100% effective. Reporting of every source and contact aids in control of Venereal Disease.

DEATHS FROM COMMUNICABLE DISEASE
January, 1943

URBAN—Cancer 40, Influenza 4, Lethargic Encephalitis 1, Measles 1, Pneumonia Lobar 3, Pneumonia (other forms)7, Poliomyelitis 1, Syphilis 6, Tuberculosis 4, Cerebrospinal Meningitis 1. Other deaths under 1 year 14. Other deaths over 1 year 179. Stillbirths 4. Total 265.

RURAL—Cancer 16, Diphtheria 1, Influenza 2, Pneumonia Lobar 4, Pneumonia (other forms) 9, Syphilis 1, Tuberculosis 10, Typhoid Fever 1, Whooping Cough 3, Mumps 1. Other deaths under 1 year 15. Other deaths over 1 year 110. Stillbirths 13. Total 186.

INDIANS—Influenza 1, Pneumonia (other forms) 3, Tuberculosis 6, Whooping Cough 2. Other deaths under 1 year 1. Other deaths over 1 year 6. Stillbirths 4. Total 23.

DISEASE	Manitoba Jan. 31-Feb. 27 *737,935	Ontario Jan. 31-Feb. 27 *3,824,734	Saskatchewan Jan. 31-Feb. 27 *905,974	Minnesota Jan. 31-Feb. 27 *2,792,300	North Dakota Jan. 31-Feb. 27 *641,935
Anterior Poliomyelitis	3	.....	.....	2	.....
Chickenpox	154	1278	170	213	.....
Diphtheria	31	3	3	12	1
Dysentery—					
Amoebic	.....	.....	.....	1	.....
Bacillary	.....	.....	.....	15	.....
Erysipelas	4	1	.....	1	.....
Influenza	55	282	.....	3	55
Measles	154	841	742	123	107
Meningococcal Meningitis	3	15	1	9	2
German Measles	10	73	42	.....	.....
Mumps	593	4437	430	.....	390
Pneumonia, Lobar	9	.....	.....	.....	.....
Scarlet Fever	105	498	111	246	39
Septic Sore Throat	4	9	.....	.....	.....
Tularemia	.....	.....	.....	.....	1
Trachoma	1	.....	.....	.....	4
Tuberculosis	47	192	42	42	15
Typhoid Fever	.....	1	1	.....	.....
Undulant Fever	.....	.....	.....	.....	2
Whooping Cough	129	416	30	295	30
Diphtheria Carriers	3	.....	.....	.....	.....
Meningococcal Meningitis Carriers	4	.....	.....	.....	.....
Gonorrhoea	158	327	.....	.....	9
Syphilis	39	398	.....	.....	21

* Approximate Populations

Department of Health and Public Welfare

Free Pertussis Vaccine and Pertussis Vaccine Combined with Diphtheria Toxoid

The Minister of Health and Public Welfare, the Honourable James McLenaghen, hereby announces that on the recommendation of the Provincial Board of Health, pertussis vaccine alone and also combined with diphtheria toxoid, has been added to the list of biologicals distributed free of cost by the Department of Health and Public Welfare in the Province of Manitoba. Application for these is made in the usual manner. The Board of Health in recommending that these products be placed on the free list asked that the Department arrange with the physicians to *keep records* of the names and ages of those immunized, also the dates of administration, and to submit copies of these records to the Department of Health and Public Welfare at the conclusion of each clinic or at least at the end of each year. These will be tabulated in the Department and from the statistics information regarding immunity may be derived. Record forms will also be supplied.

Table 1.

DIPHTHERIA CASES AND DEATHS
PROVINCE OF MANITOBA, 1933-1942

Age Groups	Cases	% of cases	deaths	% of deaths
Under 1 year	50	1.7	9	6
1 year	129	4.5	23	16
2 years	160	5.6	18	12
3 years	193	6.7	17	12
4 years	154	5.4	10	7
5-9 years	715	25.0	42	29
10-14 years	419	14.6	10	7
15-19 years	291	11.6	4	3
20-29 years	370	12.9	2	1
30-39 years	228	8.0	5	3
40+ years	100	3.5	6	4
Age unknown	54	1.9		
TOTAL	2863	101.4	146	100
0-4 years	686	24	77	53
0-15 years	1820	64	129	89

Table 2

WHOOPING COUGH DEATHS
PROVINCE OF MANITOBA, 1933-1942

Age Groups	Deaths	% of Deaths
0-3 months	121	36
4-6 months	59	18
7-9 months	37	11
10-12 months	19	6
1 year	58	17
2 years	17	5
3 years	10	3
4 years	9	3
5 years	1	0.3
6 years	1	0.3
7 years	1	0.3
8 years	0	0
9 years	2	0.6
10 years	1	0.3
Age unknown	0	0
TOTAL	336	100.8
Under 1 year	236	71
Under 2 years	294	88
Under 5 years	330	98

Tables 1 and 2 have been prepared to show the danger periods as regards deaths from (1) diphtheria, (2) whooping cough, as these also indicate when vaccines should be given to forestall such an event.

Table (1), diphtheria, shows that although only 24% of cases occur under 5 years, 53% of the deaths occur in that group. Actually 64% of diphtheria deaths in Manitoba take place before the age of six or in the pre-school group. Eighty-nine per cent occur before fifteen. The second year of life is hit the hardest with 16% of the deaths. The indication for early immunization surely is plain!

Our *diphtheria cases* have only dropped from 405 in 1933 and 481 in 1934, to 241 in 1941 and 265 in 1942. This is not enough when we have a highly efficient preventive such as diphtheria toxoid. True the deaths have dropped from 21 and 28 to 7 and 11 in the corresponding years. This may be due to earlier and better treatment but still constitutes a serious loss of children to the province. The case fatality rate over the ten-year period was 5.1%.

Table (2), whooping cough deaths, shows that 36% of the deaths occur in the first three months of life and 54% under seven months. There is no inherited immunity! Seventy-one per cent of deaths occur under one year and 88% under two years. Again the indication is definite. Immunization should be done by six months or earlier but keeping in mind that reactions are more common under that age. We did not break down the cases by age groups for the ten-year period, as reporting of this disease is by no means adequate. We did break them down for 1940 in which year 1,831 cases were reported and 46 deaths. It showed that the attack rate was no higher during the first year than any year up to the ninth but the death rates were highest under four months becoming

Department of Health and Public Welfare

progressively less up to the third year when they stopped excepting for one death in a four-year-old. The ten-year case fatality rate was 2.7%. This does not seem high but 336 deaths in ten years is a tremendous loss.

Pertussis vaccine alone comes only in "one person" packages consisting of a 6 cc. bottle with pierceable rubber stopper and directions for giving the vaccine.

Pertussis vaccine combined with diphtheria toxoid comes in "one person" and "six person" packages with instructions. The size of dosage for pertussis vaccine alone and combined is the same.

Conclusions. Both these products are relatively expensive and *it is recommended* that they be used *only* on children under six years of age.

Pertussis vaccine is best given at the age of six months but may be given earlier if care is used as to dosage. After the age of two years pertussis vaccine cannot cut down the death rate to any degree so *perhaps* its real value ends there.

Pertussis vaccine combined with diphtheria toxoid is recommended for immunization in this young group, against both diseases simultaneously. It is best given at the age of six months and not over six years. For pre-school children it should be ideal, especially between the ages of six months and two years. After two years perhaps diphtheria toxoid alone should be used.

Be sure to keep records of those done and the date.

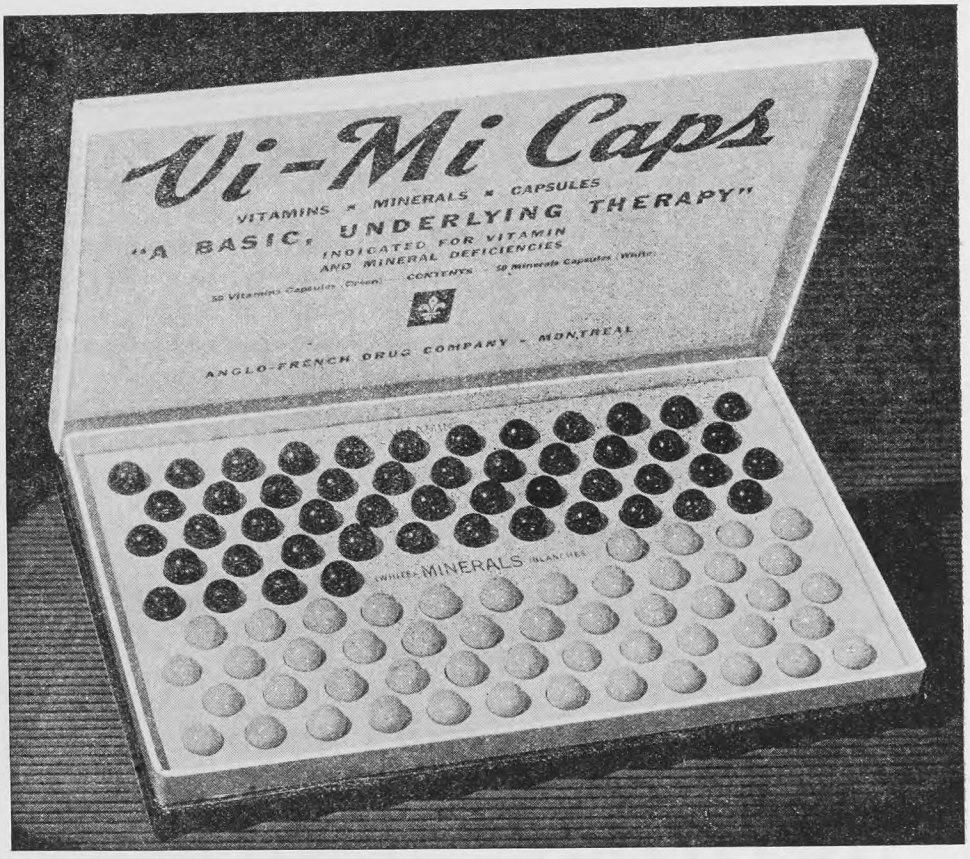
M.B.

To aid in the war effort, the Department of Health and Public Welfare urgently requests all physicians in the Province of Manitoba, to obtain if possible the names and addresses or even telephone numbers of sources and contacts to the venereal diseases. Any information as to place employed or hangout and description of party is of value to our workers in locating these sources and contacts. These should be reported to the Department on the Venereal Disease Report from the "Physician's Report Book" supplied. The reverse side of the report form may be used if necessary.

BALANCED NUTRITIONAL SUPPLEMENTS

Vi-Mi Caps

VITAMINS MINERALS CAPSULES



Integral Vitaminotherapy Associated to Minerals

DOSAGE: 1 Vitamine and 1 Mineral capsule daily is the average dose for Adults and for Children. For increased effect 2 of each capsule may be given to Adults.

HOW SUPPLIED: In boxes of 100 capsules—50 Vitamins (green) 50 Minerals (white).

Samples on request from:

ANGLO-FRENCH DRUG CO. — 209 St. Catherine Street East — MONTREAL

For **Arthritis - Chronic Rheumatism**

SULFOSALYL

Containing the three salicylates, sulphur, calcium, thyroid and parathyroid in enteric coated capsules, dissolving in the intestines, thus avoiding gastric irritation.

Samples on request from:

ANGLO-FRENCH DRUG CO. — 209 St. Catherine Street East — MONTREAL

What's Cooking!

by GOODRIN S. THOMPSON
Manitoba Nutrition Campaign Committee

The first quantitative analysis of food materials was reported in England in 1795. Since then numerous reports have been published, but we will note only three of them, which are of special interest to us. The United States Department of Agriculture published the "Chemical Composition of American Food Materials in 1895, and the first compilation of the "Vitamin Content of Foods" in 1937. The first summary of the food values of cooked foods was published in 1938 in England by Boas-Fixen.

At present extensive research is in progress in all countries and interest certainly is not lagging, not only in the laboratories, but among the layman—from the housewives to radio announcers. All know their vitamins and how many units they should have and what foods supply them. To one who stops to think, however, the subject is not so simple as it appears. Most scientific investigations have been done on fresh food taken from good soil. This however does not indicate the vitamin content of food from poor soil and prepared by a conscientious but unscientific cook.

A diet, though rich in the protective foods, such as fruits and vegetables, may not be an adequate source of vitamins and minerals. The reason for this is—a diet rich in vitamins and minerals—can be seriously depleted by many factors, which operate before the food reaches the table. The food can only have its maximum content of vitamins and minerals if climatic conditions, the soil, the farmer, the truckman, the railroad, the storage house, the food processor and the cook all co-operate to protect that content.

Now if the soil is depleted in minerals, the plant will be depleted in minerals proportionally, and may produce food lacking in both minerals and vitamins. For instance the vitamin A value of milk and butter is determined by the fodder of the cow. There are seasonal differences too, summer milk and butter being higher in vitamin A than winter milk and butter.

Transportation and storage does preserve and protect the appearance and palatability of foods, but definitely affects the vitamin values. The food transported from one part of the country to another may be exposed to humidity, light, changes in temperature and air, which are all factors lessening the vitamin content of foods.

Processing is like transportation in that it is designed to preserve appearance and palatability, and frequently does so at the expense of vitamin-mineral content.

Cooking methods destroy vitamins and lose minerals. Cooking water is often rich in these elements—but it is too frequently discarded, and drained away—taking the vitamins and minerals with it. Temperature and exposure to air in the cooking process are also destructive to vitamins and so is the use of bicarbonate of soda—particularly in vegetables.

There is need to change our methods of cooking—to get the good from our food. This is clearly illustrated in a vitamin B_1 and C investigation on vegetables cooked and served in a restaurant, catering to 600 people. Figures show (1) 20 per cent of the initial vitamin B_1 and C was destroyed by cooking, (2) another 25 per cent lost by discarded cooking water and (3) an additional 25 per cent lost on the steamtable from oxidation. Hence only about one-quarter of the original vitamin B_1 and C reached the consumer.

Considering the vicissitudes that one's meals meet, it is marvelous that a vitamin remains. However, one should not be too discouraged, because after thousands of years of poor cooking, we are still alive, imperfect we grant, but searching for perfection.

In this search we would like to have analysis of the ordinary three meals a day served at home or in a restaurant. The survey to be conducted in different regions, covering poor and rich soils, and including high, average and low-income groups, together with cooking methods. The results, as well as better methods of food conservation, should be given to the housewives.

◆ ◈

If every Canadian buys one more War Savings Stamp each week during 1943 the resulting $149,500,000 will pay for the clothing and equipment of every man and woman in our three services.

The Canadian-made Catalina coastal patrol bomber has nine miles of wiring and generates enough electricity to meet the needs of a small block of dwellings. Victory bonds make them possible.